Stem Cells' position statement on hESC research.

Journal: Stem Cells

Publication Year: 2010

Authors: Miodrag Stojkovic, Mark F Pittenger, Jan A Nolta, Majlinda Lako, T R J Lappin, Martin J Jr Murphy

PubMed link: 20809560

Funding Grants: Sustained siRNA production from human MSC to treat Huntingtons Disease and other neurodegenerative disorders

Public Summary:

The journal Stem Cells has published many important and exciting achievements in the field of stem cells during its 28-year history. Through scientific discovery, the journal reports on both adult and human embryonic stem cells (hESCs). The journal believes that the scientific community benefits from research on all stem cell types to maximize our basic biological knowledge and our ability to fight debilitating human diseases. Therefore, we applauded the US Food and Drug Administration in July when it approved the first authorized clinical trials using hESCs to treat spinal cord injury. This decision encouraged researchers, clinicians, and patients alike. Dr. Nolta's quote from this position statement: ''There have been tremendous advances toward developing stem cell treatments for incurable diseases through the understanding that has come from studying embryonic stem cells, and much of this groundbreaking work has been published in Stem Cells. This legal injunction acts to remove hope from those patients who are awaiting cures. We have worked with adult stem cells for over 20 years. They are interesting cells. Hematopoietic stem cells can replace the blood forming system and mesenchymal stem cells can act as ''paramedics'' to help heal damaged tissues and promote revascularization. But this occurs through the release of factors at the site of tissue damage. These cells unfortunately can not make an entire tissue. They do not replace the working cells of the liver, kidney, pancreas, or brain for instance. In contrast, we know that embryonic stem cells can generate any tissue, for possible future replacement therapies. The new field of induced pluripotent stem cells brings us a possible future alternative to the use of hESC, and this field is exciting because we can envision making patients their own cell line. However, this cell type is new, understudied, and must be compared with the gold standard of hESC at every step of experimentation,'' said Dr. Jan A. Nolta, Associate Editor of Stem Cells.

Scientific Abstract: